

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: FLORES-LIRA, Ricardo; GARZA-DE LA GARZA, Sanjuana

SERIAL NO.:

FILED: Herewith

TITLE: PRODUCTION OF TETRABASIC LEAD SULFATE FROM SOLID STATE REACTIONS FOR THE PREPARATION OF ACTIVE PLATES TO BE USED IN LEAD-ACID BATTERIES

PRELIMINARY AMENDMENT

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In conjunction with the filing of the present application, and prior to an initial Official Action on this matter, please amend the above-identified application as follows:

Preliminary Amendment: SPECIFICATION AMENDMENTS

In Paragraph [0019], please amend the paragraph as follows:

Fig. 1 shows a graph illustration of a characteristic x-ray diffraction pattern for tetrabasic lead sulfate obtained by a solid state reaction according to the present invention.

IN THE ABSTRACT

On page 16, please amend the ABSTRACT as follows:

~~The present invention relates to different methods used for the~~ The production of tetrabasic lead sulfate by means of solid state reactions at high temperatures, ~~which~~ allow the formation of powders having a particle size of less than 10  $\mu\text{m}$ . In the methods ~~which are claimed in the present invention,~~ the chemical reaction that takes place between lead oxide and different sulfated compounds occurs in a single high temperature treatment. The sulfated compounds used in the present invention to produce the tetrabasic lead sulfate are:  $\text{PbSO}_4$ ,  $3\text{PbO} \cdot \text{PbSO}_4 \cdot \text{H}_2\text{O}$ ,  $\text{H}_2\text{SO}_4$  and  $(\text{NH}_4)_2\text{SO}_4$ . ~~The present invention also claims the~~ There are lead-acid battery pastes produced using the tetrabasic lead sulfate ~~made according to the methods claimed,~~ the lead-acid battery plates made with ~~said the~~ the pastes, and the lead-acid batteries subsequently made with ~~them~~ the plates.